

II) Amendments to the Claims

The listing of claims will replace all prior version, and listings, of claims in the application.

Listing of Claims

Claim 1 (Currently amended). An electrostatic discharge (ESD) protection device, comprising:

- a semiconductor bulk of a first conductivity type;
- a first doped region of a second conductivity type formed in said semiconductor bulk;
- a second doped region of a second conductivity type formed in said semiconductor bulk;
- a channel region formed between said first doped region and said second region;
- a first gate segment formed over a first part of said channel region;
- a first ~~field-oxide segment~~ field-oxide stripe formed over a third part of said channel region; wherein
- a first part of said first gate segment overlaps said first ~~field-oxide segment~~ field-oxide stripe.

Claim 2 (Original). A device according to Claim 1, wherein said first is a first end.

Claim 3 (Original). A device according to Claim 1, wherein said first and third parts form a first continuous portion of said channel.

Claim 4 (Currently amended). A device according to Claim 1, wherein said first gate segment and said first ~~field-oxide segment~~ field-oxide stripe are substantially collinear.

Claim 5 (Original). A device according to Claim 1, wherein said first gate segment comprises a polysilicon element over an oxide layer.

Claim 6 (Currently amended). A device according to Claim 1, further comprising a plurality of islands formed over said bulk and being ~~enclosed~~encircled by said first doped region .

Claim 7 (Original) A device according to Claim 6, wherein said plurality of islands comprises a first and second arrays of islands; said first array of islands comprises polysilicon-over-oxide islands; and said second array of islands comprises field-oxide islands .

Claim 8 (Original) A device according to Claim 7, wherein said first array of islands is closer to said channel region than said second array of islands.

Claim 9 (Currently amended) A device according to Claim 7, further comprising a second gate segment formed over a second part of said channel region; and a first part of said second gate segment overlaps said first ~~field-oxide segment~~ field-oxide stripe.

Claim 10 (Original) A device according to Claim 9, wherein said first part of said second gate segment is a first end of said second gate segment.

Claim 11(Original) A device according to Claim 1, wherein said second and third parts from a second continuous portion of said channel.

Claim 12 (Original) A device according to Claim 1, wherein said first doped region couples to a pad.

Claim 13 (Original) A device according to Claim 1, wherein said second doped region couples to a power bus.

Claim 14 (Currently amended) An electrostatic discharge (ESD) protection device, comprising:

a semiconductor bulk of a first conductivity type;

a first doped region of a second conductivity type formed in said semiconductor bulk;

a second doped region of a second conductivity type formed in said semiconductor bulk;

a channel region formed between said first and said second doped regions;

said channel region comprising a split-channel region and a non-split-channel region;

said split –channel region including a first and a second sub-channel regions spaced apart from each other; wherein said first sub-channel region being adjacent to said first doped region and second sub-channel region being adjacent to said doped region;

a first gate segment formed over said first sub-channel region;

a second gate segment formed over said second sub-channel region;

a first ~~field-oxide segment~~ field-oxide stripe formed over said non-split-channel region; and said first and said second gate segments form a stack-gate structure .

Claim 15(Original) A device according to Claim 14, wherein said first and said second gate segments are substantially parallel to each other .

Claim 16(Currently amended) A device according to Claim14, wherein said first gate segment, said second gate segment and said first ~~field-oxide segment~~ field-oxide stripe are substantially parallel to each other.

Claim 17(Original) A device according to Claim 14, wherein said split channel region is connected to said non-split channel region to form a continuous channel region .

Claim 18(Original) A device according to Claim14, wherein said first gate segment comprises a polysilicon element over an oxide layer .

Claim 19 (Original) A device according to Claim 14, wherein said second gate segment comprises a polysilicon element over an oxide layer.

Claim 20 (Original) A device according to Claim 14, wherein said first gate segment have a first part overlapping a field-oxide extension segment; and said second gate second gate segment have a second part overlapping said field-oxide extension segment .

Claim 21 (Original) A device according to Claim 20, wherein said first part is first end; and said second part is a second end.

Claim 22 (Currently amended) A device according to Claim 14, further comprising a plurality of islands formed over said bulk and being encircled by said first doped region.

Claim 23 (Original) A device according to Claim 22, wherein said plurality of islands comprises a plurality arrays of islands.

Claim 24 (Original) A device according to Claim 14, wherein said first doped region coupling to a pad.

Claim 25 (Original) A device according to Claim 14, wherein said second doped region coupling to a power bus.

Claim 26 (Currently amended) An electrostatic discharge (ESD) protection device, comprising:

- a semiconductor bulk of a first conductivity type;

- a first doped region of second conductivity type formed in said semiconductor bulk;

- a second doped region of a second conductivity type formed in said semiconductor bulk;

- a channel region formed between said first and said second doped regions;

- a first and a second arrays of islands formed over said bulk and being enclosed encircled by said first doped region; wherein

said first array of islands comprising polysilicon-over-oxide islands;
said second array of islands comprising field-oxide islands; and
said first array of islands being closer to said channel region than said second array
of islands.